

DESCRIPTION OF PLATE I.

- Figs. 1-3. *Paracyathus Andersoni*. 1, side view, nat. size; 2, a system of septa and pali, magnified; 3, costæ, magnified.
- 4-6. *P. profundus*. 4, side view, nat. size; 5, a half-system of septa and pali, magnified; 6, costæ, magnified.
- 7-9. *P. indicus*. 7, side view, nat. size; 8, a system of septa and pali, magnified; 9, costæ, magnified.
- 10, 11. *P. caruleus*. 10, side view, nat. size; 11, a half-system of septa and pali, magnified.
- 12-14. *P. merguensis*. 12, side view, nat. size; 13, a half-system of septa and pali, magnified; 14, costæ, magnified.
- 15, 16. *Polycyathus Verrilli*. 15, part of a colony, nat. size; 16, a corallite, magnified. The pali are the outer knobs of the axial space.
- 17, 18. *P. difficilis*. 17, part of a colony, nat. size; 18, a corallite, magnified.
- 19, 20. *Goniastræa incrustans*. 19, part of a colony, nat. size; 20, a calice, magnified.
- 21, 22. *Solenastræa (Quelchia) spongiformis*. 21, the colony, nat. size; 22, calices, magnified.
- 23, 24. *Leptastræa humilis*. 23, calices, nat. size; 24, a calice, magnified.
- 25, 26. *Balanophyllia merguensis*. 25, coral, nat. size; 26, part of a calice, magnified.
- 27, 28. *Dendrophyllia coarctata*. 27, colony, nat. size; 28, part of a calice, magnified.
- 29, 30. *D. (Cænopsammia) affinis*. 29, the colony, nat. size; 30, a calice, magnified.

On the Holothurians of the Mergui Archipelago collected for the Trustees of the Indian Museum, Calcutta, by Dr. John Anderson, Superintendent of the Museum. By Professor F. JEFFREY BELL, M.A., Sec. R.M.S. (Communicated by Dr. JOHN ANDERSON, F.R.S., F.L.S.)

[Read 3rd June, 1886.]

(PLATE II.)

THE collection of Holothurians made by Dr. John Anderson, though small, offers some points of interest, for it contains an unexpectedly large number of undescribed species, of species known to me before from one locality only, or forms that have as yet been seen only by those who described them.

The recent publication of Dr. Kurt Lampert's comprehensive monograph on the Holothuroidea * renders it unnecessary for me

* Reisen &c. von Dr. C. Semper. II. iv. Die Seewalzen, von Dr. Kurt Lampert: Wiesbaden, 1885.

to enter here on any extensive bibliography ; I propose, in most cases, to refer simply to that naturalist's work.

1. *SYNAPTA RECTA*, *Semper* ; *Lampert*, p. 220.—Owen Island. This species has hitherto only been reported from Bohol.

2. *CHIRODOTA RUFESCENS*, *Brandt* ; *Lampert*, p. 230.—Elphinstone Island.

This is a widely distributed species, extending to Japan.

3. *CUCUMARIA FORBESI*, n. sp. (Plate II. figs. 1–3.)

Among various Echinoderms sent at different times by Mr. James A. Murray, of the Kurrachee Museum, I have recognized a new species of *Cucumaria*, which was comparatively well represented. In an essay of mine on that genus, which has now been long in preparation, I find the MS. description of this species. As it is represented in Dr. Anderson's collection by a single specimen, I here transcribe and publish that description :—

Body elongated, almost quadrilateral ; suckers numerous, confined to the ambulacral areae ; integument thick, white, dense, richly supplied with spicules. Calcareous ring simple ; retractors rather long, broadest in their middle.

The spaces separating the trivial row of suckers are narrow, and, as they lie nearly in the same plane, the general form of the body is as nearly quadrangular as pentagonal ; in these rows the suckers are not confined to two regular series ; in the bivial rows the suckers are more regularly arranged in paired sets.

The calcareous ring is simple and delicate, the retractors are inserted just behind the first anterior third of the body, and are swollen into a muscular belly about their middle. Polian vesicle large, elongated ; genital tubes simple, attached far forwards.

The spicules are not unlike those of *C. Planci*, but not so stout ; the rounded medusiform bodies have a few holes, and those large ; the supporting spicules in the suckers are nearly straight, and have a few holes, which are largest and most numerous at either end.

Measurements :—

	millim.	millim.	millim.
Length	48	57·5	63·5
Breadth of narrower interambulacrum . .	3·5	5	6
Breadth of wider do . .	4	7	7

I associate with this species the name of my lamented friend W. A. Forbes, who was for several years the Prosector of the Zoological Society of London.

4. *CUCUMARIA ASSIMILIS*, n. sp. (Plate II. fig. 4.)

A true *Cucumaria* of small size, irregular cask-like shape, soft integument, suckers arranged in zigzag or in irregular rows.

Differs from *C. leonina* in being of a slate-colour, the suckers darker, in having the spicules without projecting processes and stouter (Pl. II. fig. 4), and in not, so far as one is able to judge from the single specimen dissected, having long genital tubes.

The species would appear to be most closely allied to *C. leonina*, the spiculation being most similar to that of *Semperia syracusana*.

Length 33 ; 25 millim. Greatest breadth 14·5 ; 7 millim.

Elphinstone Island.

5. *SEMPERIA*, sp.

There are several specimens of a species of this genus, but the characters are, it seems to me, those of young and not of adult specimens, and it is therefore impossible to exactly assign the species to its proper place. It will, I think, be found to be a form that will exhibit interesting modifications during growth. The idea suggested itself to me, but did not commend itself, that the specimens in question are the young of *Cucumaria Forbesi*.

Elphinstone Island.

6. *OCNUS JAVANICUS*, *Sluiter* ; *Lampert*, p. 129.—Palaw Bay.

This species, hitherto known only from Java, seems to be fairly abundant at Mergui ; I have little doubt that the single specimen of *Ocnus*, whose specific position I was unable to identify when writing the Report on the Echinoderms of the 'Alert' Collection (see Brit. Mus. Rep. 'Alert' Coll. 1884, p. 147), belongs to *Sluiter's* species ; in which case, as the 'Alert' found it at Port Darwin, it will be widely distributed.

7. *THYONE SACELLUS*, *Selenka* ; *Lampert*, p. 154.—Elphinstone Island.

8. *STICHOPUS CHLORONOTUS*, *Brandt* ; *Lampert*, p. 107.—Elphinstone Island ; a single specimen in very bad condition.

9. *BOHADSCHIA ARGUS*, *Jaeger* ; *Lampert*, p. 87.—Elphinstone Island ; there was but one specimen of this common species.

10. HOLOTHURIA ATRA, *Jaeger*; *Lampert*, p. 85.—Elphinstone Island.

11. HOLOTHURIA IMPATIENS, *Forskål*; *Lampert*, p. 65.—Elphinstone Island.

12. HOLOTHURIA INSIGNIS, *Ludwig*; *Lampert*, p. 61.—Palaw Bay. This specimen is not of so stout a habit as those described by Prof. Lüdwig.

13. HOLOTHURIA VAGABUNDA, *Selenka*; *Lampert*, p. 71.—Owen Island and Elphinstone Island.

14. HOLOTHURIA ANDERSONI, n. sp.

In the recently proposed arrangement of Dr. Lampert, this new species will stand nearest to *H. lubrica* of Selenka, for there are no turriform or C-shaped bodies, no anal teeth, and the Cuvierian tubes are small and inconspicuous.

Body elongated, cylindrical; skin smooth, soft, not very closely packed, papillæ on bivial and scattered suckers on trivial areas. Tentacles ?20. Pharyngeal annularia only, the radial much longer than the interradians. One Polian vesicle, 25 millim. long. Genital tubes few, short, not much branched; Cuvierian tubes few, short, pale. Spicules in the form of reticulated rods only, such as are commonly found in suckers. Colour black. Length 120 millim.; breadth 26 millim.

Mergui.

In addition to the specimen described above, there are two others which in essential characters belong to the same species; the body-wall, however, is thinner, the colour is lighter, and the bivial papillæ are less thickly massed and pronounced.

DESCRIPTION OF PLATE II.

Fig. 1. *Cucumaria Forbesi*; external view. $\times \frac{3}{2}$.

2. The same, dissected to show the form of the retractor muscles (*m*), the characters of the œsophageal ring (*v*), and the size of the Polian vesicle (*p*). $\times 2$.

3. The same: *a*, front, *b*, side view of calcareous plate from the integument; *c*, medusiform plate. $\times 450$.

4. Calcareous plate from integument of *C. assimilis*. $\times 225$.

Fig 1.

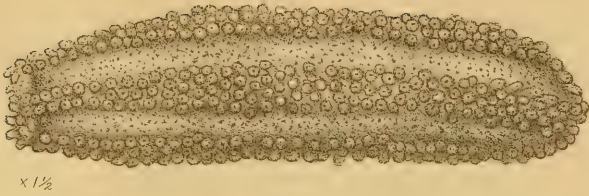


Fig. 2.

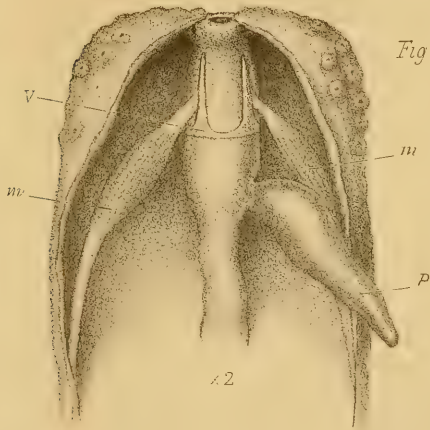


Fig 3^a

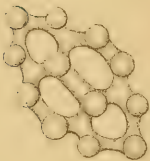
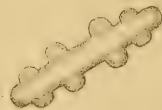


Fig 3^b



x 450



Fig. 3^c



x 450

Fig. 4.



x 225